ORIGINAL ARTICLE

Helping the Disabled to Become Respectable Members of the Society

MIAN MOHAMMAD AZHAR

ABSTRACT

Objective: To help the poor and disabled people to become respectable Members of society
Place and duration of study: Allama Iqbal Hospital Sialkot from 1997(polio day) to 2005.
Patients and methods: During the period of eight years from 1997 to 2005, About 667 patients were included in the study. The different patients included were polio (520), Cerebral Palsy (36), Rickets and bone dysplasia (23), Muscle dystrophy (17) Congenital dislocated hip (6) CTEV (42). All these patients were treated free of cost at Allama Iqbal Hospital and National bone and joint hospital Sialkot with free medication, X-rays, and Brace implants. The results of different surgical procedures in different diseases causing disability were evaluated in different categories of patients. In our study we noted that post polio paralysis is the most common cause of disability especially in poor socio-economical peoples from villages and remote areas. The results of surgical intervention are satisfactory and we can make them respectable members of society. In almost 271 patients no surgical intervention was done and conservative management like Bracing, occupational, or physical therapy was mode of treatment
Conclusion: The results of surgical interventions in different conditions like polio, cerebral palsy, bone dysplasia, CDH, CTEV etc are satisfactory and we can improve the socioeconomic status of these patients by reducing their disability level and to become respectable members of the society.
Key words: Disability, Post Polio Paralysis, Cerebral palsy, CTEV,

INTRODUCTION

Disability is an umbrella term covering impairment, activity limitation or participation restriction disability may be physical cognitive, mental, sensory emotional developmental or combination of these. The role of orthopedic surgery comes when the impairment developed and restricts the daily living activities of an individual, this impairment may be caused by disease like polio cerebral palsy, spina bifida, or congenital abnormality like clubfoot, CDH absence of limb, or fracture or burn that causes contracture.

MATERIALS AND METHODS

We started our project in 1997 on polio day and we continued free polio camp on weekly basis for three years we registered the patients with disability of different types, due to different reasons we filtered all patients and registered them as surgical or non surgical patients. Those patients who require surgery were given date and time for operation, in those patients where conservative management was decided were treated with physical and occupational therapy or brace. Initially we referred the patients to Lahore for brace measurement but we were disappointed as we dropped more that 50% of the patients the reasons were poor socioeconomic status as majority of them were unable to bear even the travelling expenses. So we establish a mobile orthopedic work shop and every week orthotic team visited our camp to take the measurement and fit the brace to the patients in the next visit. We continued to follow-up of majority of the patient's up to eight year. The maximum follow-up period was of eight years and the minimum was of three years.

Orthopedic Department, Khawaja Safdar Medical College /Allama Iqbal Hospital Sialkot.
Correspondence to Dr. Mian Azhar, Assistant Professor and Head of the Department Email drazharskt@hotmail.com, drazharskt@gmail.com

Distribution of patients according to disease causing disability (n=644)

Polio	520
CP	36
Rickets & Bone Dysplasia	23
Muscular Dystroply	17
CDH	6
CTEV	42

Age and Geographic Distribution
Age: Majority upto 15yrs.
Sex: Male 65%, Urban 13%, Rural 87%
Limb Involved:
Unilateral: 78%
Bilateral: 22%

Type of Deformities Hip deformities

Flexion Contractures	62
F + Abd	218
F + Add	31
With Abduction Contracture Alone	54
With Pelvic Tilt + Hip Deformity	14

Knee Joint Deformities

10- 20%	80
20- 40%	125
40- 60%	130
60- 90%	45
Genu Recurvatum	4
Abduction +Genu Valgus Deformity	16

Foot Deformites

Equinus Deformity	57
Calcanean Deformity	23
Cavus Deformity	20
Varus Deformity	30
Equino – Varus	160
Equino – Valgus	42
Equino–Cavo–Varus	125

Extent of Deformity

Foot deformity	154
Knee deformity	58
Hip Deformity	45
F+K	52
F+K+H	206
H+K	83
H + Foot	45

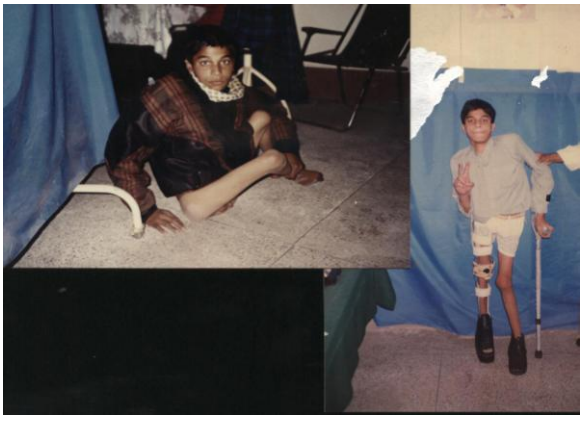
Types of Treatment

Surgical / Operated	370
Treatment by Brace	231
Conservative / Physiotherapy	43

Types of Surgery

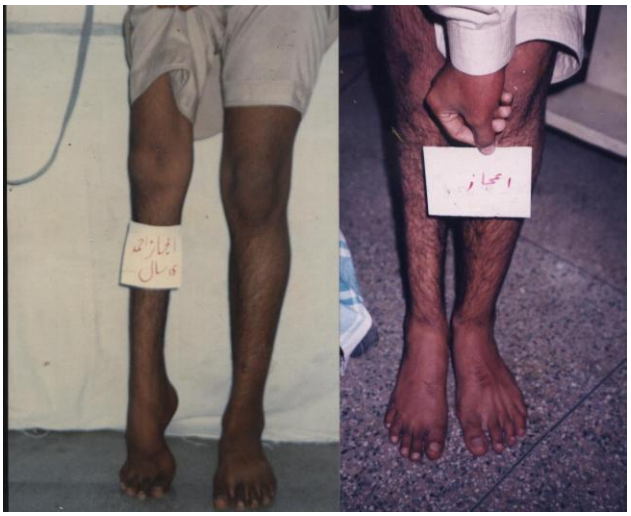
HIP Joint:

1. Flexion Contracture Release
2. F + Abduction Recontracture Release
3. Adduction Contracture Release + Neurectomny of Anterior Branch of Obturator nerve
4. Abduction Contracture Release



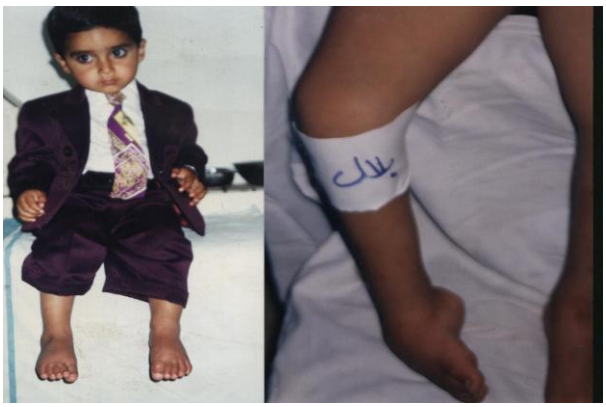
Knee Joint:

1. Supra Condylar ANT, wedge osteotomy
2. Flexor Slide Operation of hamstring/partial tibial neurectomy
3. Blount's Procedure
4. S.C Medial Wedge Osteotomy
5. S.C Lateral Wedge Osteotomy



Foot:

1. L.W.T.F. (laterally based wedge triple fusion)
2. LWTF + TAL
3. TAL
4. TAL + M. Jog Procedure
5. DWTF + LWTF + TAL
6. TA Transfer to 3rd Cuniform
7. Posteromedial Release
8. Modified John's Procedure
9. Lambrnudy type TF + TAL

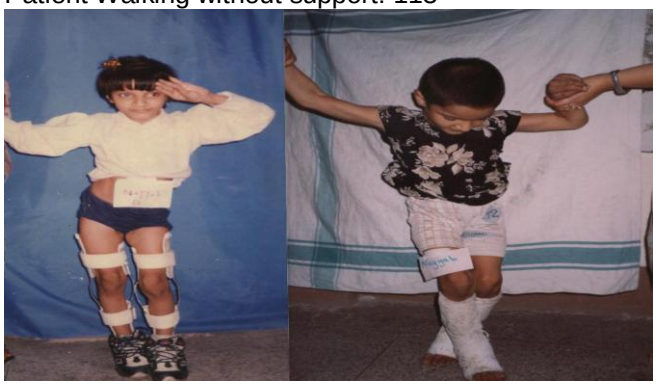


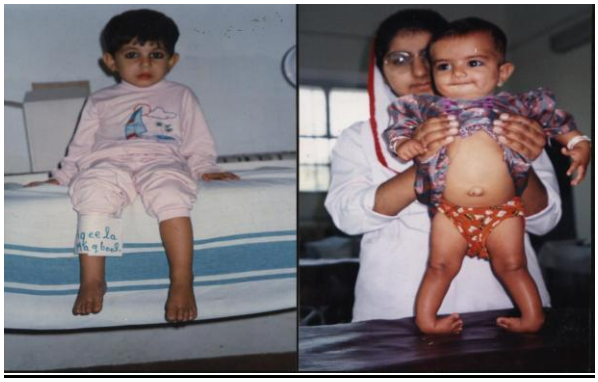
Post Operative Usage of Brace:

Patient using HKFA brace unilateral and walk with either stick/crutches or elbow support: 64

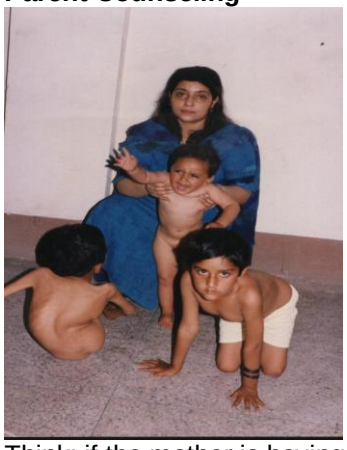
Patient require BAL HKAF brace with walker/crutches: 51

Patient Walking without support: 113





Parent Counseling



Think; if the mother is having such three disabled child, what will be the life of parents ---?

RESULTS

We studied different orthopedic problems causing disability and concluded that the results of surgical intervention was satisfactory if proper pre operative assessment, Surgical decision, Patient consul ling and confidence building measures are taken, and the patient should be fully aware that what are the aims of surgery and what we are going to achieve.

DISCUSSION

Although the most common cause of disability in our rural population is post polio paralysis, but in our population any non functional limb is labeled as polio until unless proven otherwise.

Polio has caused death of most human in history; the oldest clearly identified reference to paralytic poliomyelitis is an Egyptian stele (stone graving) over 300 years old. President Franklyn Rosevelt declared war on polio and all America recourses were put to fight against polio and in early 1960 efforts proved fruitful when 1st sack vaccine and latter sabin vaccine revolutionalized the treatment and eradicated this disease by now in developed countries. Six countries Afghanistan, Pakistan, Egypt, Niger, India and Nigeria still have polio affected victims.

The role of orthopedic surgeon comes later when the deformity has developed. The duty of orthopedic surgeon is to minimize the disability by various surgical techniques, brace, physical or occupational therapy to make such people useful members of our society. If we can eradicate the polio by giving vaccine we can make polio victims more respectable members of society by different surgical techniques.

In 1853 little's described the condition which is now called cerebral palsy. It is the involvement of the loco motor system which bring the orthopedic surgeons in the management of this disease. The surgical management in cerebral palsy patient is not predict able, it should be done early when the deformity is increasing inspite of conservative treatment like physical therapy, occupational, speech therapy, gait training, swimming and electrical stimulation or botox inject (used as temporary measures to prolong surgery)although their is no hard and fast rule for contraindication but generally the child having poor head control, poor balance, severed involuntary movements, persistent tonic reflex surgery should not be done. Surgery is confined to spastic type cerebral palsy and is rarely indicated in athetoid or ataxic type of the child is severely handicapped surgery is not indicated as the aim for treating cerebral palsy patient is to improve

function and decrease disability and deformity and not simply to correct the deformity.

The commonly noted deformity noted in lower limbs is scissor gait, hip and knee flexion, equines at ankle, varus and valgus deformity.

Different surgical procedures like hip and knee release, tendon lengthening, transfer of tibialis posterior to lateral side to correct varus deformity and when hyper mobility of subtaller joint is established , the classical procedure like extra articular arthodesis of subtaler joint (Grice Green) to correct valgus deformity is recommended.

We have twelve patients with leg length discrepancies but surgical procedure was done in three patients with N A fixator (Naseer Awais fixator) by distraction osteogenesis technique.

RECOMMENDATION AND CONCLUSION

The surgical team should be aware of the following steps

1. Proper evaluation of patient in terms of muscle power, contracture, type of deformity, nature of disease, leg length discrepancy, socioeconomic status and occupational status, future plans rural or urban background, must be taken into consideration before any discussion.
2. Anesthetist and surgeon must be aware of the rule of two for treating such patients ie they need usual dose of anesthesia divided by 2 and need two times longer time to recover from anesthesia, need two times more the dose of pain killers two times longer stay in bed at hospital and two times more rest at home before going back to work.
3. Patient must be fully aware that what kind of surgery is going to be preformed and what are the goals and expectations of such surgery, the duration and outcome of treatment must be properly explained to the patients
4. Regarding the use of Brace, the surgeon and patients approach should be clearly demarcated and patient should be aware, what he is going to get from it, otherwise majority of the patient discontinue using the Brace. In our opinion there are two reasons for that

- They don't give importance to brace as it was free, they don't understand its importance implants because of low I.Q and poor qualification.
- They learn to live with their deformity and don't accept the brace for a longer period of time, so we recommend that lightweight brace should be used.

The orthopedic surgeon plays the pivot roll for treating such patients. Different faculties like gynecology, Pediatrician, surgeon and physiotherapist should be the part of the team.

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REFERENCES

1. Abbs, S., Roberts, R.G., Mathew, C.G., Bently, D.R., Bobrow, M. (1990). Accurate assessment of intragenic recombination frequency within the Duchenne muscular dystrophy gene. Genomics 7:602-606.
2. Bakker, E., Bonten, E.J., Veenema, H., Den Dunnen, J.T., Grootsholten, P.M., Van Ommen, G.J.B. 1989). Prenatal diagnosis of Duchenne muscular dystrophy: a three-year experience in a rapidly evolving field. J. Inherited Metab.Dis. 12:174-190.
3. Bullock, D.G.,MsSweenty, F.M., Whitehead, T.P., and Edwards, J.H.(1979).Serum creatine kinase activity and carrier status for Duchenne muscular dystrophy. Lancet 2:1151-1152.
4. Stein J (2008). Stroke.In WR Frontera et al., eds., Essentials of Physical Medicine and Rehabilitation, 2nd ed., pp.887-891. Philadelphia: Saunders Elsevier.
5. Gowers, W.R. (1879). Clinical lecture on pseudo-hypertrophic muscular paralysis. Lancet 2:37-39.
6. Fanin, M., Danieli, G.A., Vitiello, L., Senter,L., and Angelini, C.(1992). Prevalence of dystrophin-positive fibers in 85 Duchenne muscular dystrophy patients. NeuromuseDisord. 2:41-45
7. Fishbeck, K.H.M (1989). The Difference between Duchenne and Becker dystrophies. Neurol. 39:584-585.
8. Crothes B., Paine, R.: The natural history of cerebal palsy, Cambridge, 1959, Harvard University Press.
9. Denhoff, E., and Holden, R.H.: Early diagnosis of cerebal palsy by assessment of upper extremities, Clin. Orthop.46:37, 1966.
10. Drennan, J.C: Orthopaedic management of neuromuscular disorders, Philadelphia, 1983, J.B, Lippincott Co.
11. Evans, P., Agassiz, C.D.S., Pritchard, F.E., and Nissen, J.J.: Symposium on cerebal palsy, Proc. R.Soc Med. 44:82, 1951.
12. Gage,J.R.: Orthopaedic aspects of cerebral palsy. Presented at American Academy for Cerebral Palsy and Developmental Medicine Symposium Growing Up with Cerebral Palsy,